

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A rack comprising:
a rack frame to house one or more electrical devices;
an interface column coupled to the rack frame, the interface column including
one or more backplane modules including one or more interfaces for electrically
coupling to the one or more electrical devices housed in the rack frame, and
an electrically conductive bus coupled to the one or more interfaces to reduce the
number of separate cables running along the rear portion of the rack frame, and
a midplane module coupled to the electrically conductive bus for concentrating access
to the one or more electrical devices coupled to the one or more backplane modules, wherein the
midplane module is communicatively coupled to the one or more backplane modules.
2. (Currently Amended) The rack of claim 1 further comprising:
an interface module coupled to an interface in the interface column, the interface
module to uniquely identify an interface and provide communicative access to the one or more
electrical devices coupled thereto.
3. (Original) The rack of claim 2 wherein the interface module is hot-swappable to permit
adding or removing electrical devices without the need to power off other components in the
rack.
4. (Original) The rack of claim 1 wherein the interface column extends vertically along a
rear portion rack frame.
5. (Original) The rack of claim 1 wherein the number of interfaces in the interface
column may be added as they are needed.
- 6.-7. (Cancelled)

8. (Currently Amended) The rack of claim ~~[[7]]~~ 1 further comprising:
a control module communicatively coupled to the midplane module, the control module configured to communicate with the one or more electrical devices housed in the rack frame.
9. (Original) The rack of claim 8 wherein the control module is housed in the rack frame.
10. (Original) The rack of claim 8 wherein the control module is further configured to maintain an inventory of the devices that are coupled to the interface column.
11. (Original) The rack of claim 8 wherein the control module is further configured to provide an operator control access to one or more of the devices coupled to the interface column.
12. (Original) The rack of claim 8 wherein the control module provides keyboard and video access to the one or more devices coupled to the interface column.
13. (Original) The rack of claim 8 wherein the control module permits devices coupled to the interface column to share a peripheral device.
14. (Original) The rack of claim 8 wherein the control module is communicatively coupled to other electrical devices in other rack frames and capable to manage those electrical devices.
15. (Original) The rack of claim 14 wherein the control module is configured to gather physical location information and configuration information of the electrical devices.
16. (Original) The rack of claim 8 wherein the control module provides centralization security access to the electrical devices.
17. (Original) The rack of claim 8 wherein the control module gathers and analyzes usage of the electrical devices for proper preventive maintenance and provisioning of the electrical devices.

18. (Original) The rack of claim 1 further comprising:
a dual redundant power supply electrically coupled to the one or more electrical devices housed in the rack frame and configured to provide uninterrupted power.

19.-23. (Cancelled)

24. (Currently Amended) A rack management system comprising:
a rack frame to house one or more electrical devices; and
an interface column coupled to the rack frame, the interface column including
one or more interfaces to electrically couple to the one or more electrical devices housed in the rack frame,
an electrically conductive bus coupled to the one or more interfaces to reduce the number of separate cables running along the rear portion of the rack frame[[]], and
a control module coupled to the electrically conductive bus in the interface column to provide management access to the one or more electrical devices coupled to the interface column.

25. (Original) The rack management system of claim 24 wherein the control module is further configured to
maintain an inventory of those devices coupled to the interface column and recognize when electrical devices have been added to the rack frame,
provide keyboard and video access to the one or more devices coupled to the interface column, and
permit electrical devices coupled to the interface column to share a peripheral device.

26. (Original) The rack management system of claim 24 wherein the control module is further configured to
provide mouse, serial port, and universal serial bus access to the one or more devices coupled to the interface column.

27. (Original) The rack management system of claim 24 wherein the control module is further configured to

provide centralized security access to the electrical devices, and
collect and analyze usage of the electrical devices for proper preventive maintenance, metering, monitoring and provisioning of the electrical devices.

28. (Original) The rack management system of claim 24 wherein the control module is further configured to permit a user to remotely control one or more of the electrical devices coupled to the interface column.

29. (Original) The rack management system of claim 24 wherein the control module is further configured to remotely control one or more electrical devices coupled to an interface column of another rack frame.

30. (Original) The rack management system of claim 24 wherein the control module is further configured to automate management of the one or more electrical devices based on user programmable rules.

31.-36.(Cancelled)

37. (New) The rack of claim 2 wherein the interface module is hot-swappable to permit adding or removing electrical devices without the need to power off other components in the rack by using a detect-and-enable protection circuitry that identifies when new devices have been connected or come online and enabling them through the detect-and-enable protection circuitry.

38. (New) The rack of claim 2 further comprising:
a plurality of the interface modules further comprising a plurality of synchronization signals, a plurality of video signals, and a plurality of USB signals; and

the one or more backplane modules further comprising

a sync selector to select one of the plurality of synchronization signals from one of the plurality of the interface modules,

a video switch to select one of the plurality of video signals from one of the plurality of the interface modules, and

a USB switch to select one of the plurality of USB signals from one of the plurality of the interface modules.

39. (New) The rack of claim 38 wherein the one or more backplane modules further comprises a module-reset unit allowing the backplane module to reset the interface module.

40. (New) The rack of claim 38 wherein the midplane module further comprises

a sync selector to select one of a plurality of synchronization signals from the one or more backplane modules;

a video switch to select one of a plurality of video signals from the one or more backplane modules; and

a USB switch to select one of a plurality of USB signals from the one or more backplane modules.

41. (New) The rack of claim 40 wherein the midplane module further comprises a module-reset unit to allow the midplane module to reset the one or more backplane modules.

42. (New) A rack comprising:

a rack frame to house one or more electrical devices; and

an interface column coupled to the rack frame, the interface column including

one or more interfaces for electrically coupling to one or more electrical devices housed in the rack frame,

an electrically conductive bus coupled to the one or more interfaces to reduce the number of separate cables running along the rear portion of the rack frame; and

an interface module coupled to an interface in the interface column, the interface module to uniquely identify an interface and provide access to electrical devices coupled thereto.